

## REMARKS

The claims are claims 1 to 6.

The application has been further at the first paragraph to cite the correct priority provisional application.

Claims 1, 2, 4 and 5 are amended. Claims 1 and 4 are amended to more clearly define the "fixed length overlap region" as less than the entire overlapping as recited in the application at page 10, line 9 to page 11, line 11. Claims 2 and 5 are amended to include definitions of the functions  $x[]$  and  $y[]$  as recited in the application at page 7, lines 3 to 6. This amendment is for clarity only as the original claims did not define these functions but they were clearly described in specification of the application.

Claims 1, 3, 4 and 6 were rejected under 35 U.S.C. 102(e) as anticipated by Crockett U.S. Patent Application Publication No. 2004/0122663.

Claims 1 and 4 recite subject matter not anticipated by Crockett. Claims 1 and 4 recite "calculating a cross-correlation  $R[k]$  for index value  $k$  between overlapping frames for a range of overlaps between  $S_s + k_{\min}$  to  $S_s + k_{\max}$  for only a fixed length overlap region less than an entire overlapping region." The OFFICE ACTION cites paragraphs [0152] to [0157] and step 210 illustrated in Figure 5 of Crockett as making obvious calculating the cross-correlation. These paragraphs of Crockett teach unspecified optimization in determination of a common splice point for multiple input channels. This fails to make obvious calculation of a cross-correlation as recited in claims 1 and 4. These paragraphs of Crockett fail to include any mention of correlation. These paragraphs of Crockett fail to include any teaching of the recited calculating range of "a range of overlaps between  $S_s + k_{\min}$  to  $S_s + k_{\max}$ ." The unspecified optimization of Crockett is between pairs of the multiple input channels. This differs from the

cross-correlation between an analysis function and a synthesis recited in claims 1 and 4. Crockett teaches using "overlapping identified regions" in determining common splice points. However, Crockett includes no teaching that the cross-correlation calculation occurs within "a fixed length overlap region" that is less than the entire overlap. Crockett fails to teach any limitation on the overlap region for calculation of a cross-correlation. Accordingly, claims 1 and 4 are allowable over Crockett.

Claims 3 and 6 recite subject matter not anticipated by Crockett. Claims 3 and 6 recite the cross-correlation calculation employs "only a center half of the overlap region for  $k = 0$ ." The OFFICE ACTION cites paragraphs [0152] to [0157] and [0252] of Crockett as anticipating this limitation. Paragraphs [0152] to [0157] of Crockett teach selecting a common multichannel splice point considering "overlapping identified regions" between the channels. This teaching of Crockett fails to limit consideration to the "center half of the overlap region" as recited in claims 3 and 6. Paragraph [0252] includes no teaching of overlapping regions. Accordingly, claims 3 and 6 are allowable over Crockett.

Claims 2 and 5 were rejected under 35 U.S.C. 103(a) as made obvious by the combination of Crockett U.S. Patent Application Publication No. 2004/0122663 and Suzuki et al paper "TIME-SCALE MODIFICATION OF SPEED SIGNALS USING CROSS-CORRELATION FUNCTIONS."

Claims 2 and 5 recite subject matter not made obvious by the combination of Crockett and Suzuki et al. Claims 2 and 5 recite calculating the cross-correlation "employs the equation

$$R[k] = \sum_{i=\text{initial}_x}^{\text{final}_x} \text{sign}\{y[mS_s + i + k]\} \cdot \text{sign}\{x[mS_a + i]\}$$

where:  $x[i]$  is the analysis of the input signal for index value  $i$ ;  $y[i]$  is a synthesis signal for the index value  $i$ ." The OFFICE ACTION cites equation (1) of Suzuki et al as making obvious the equation listed in claims 2 and 5. Equation (1) of Suzuki et al reads:

$$R(\tau) = \sum_{m=0}^{\tau-1} x(i+m+\tau) \cdot x(j-m)$$

Equation (1) of Suzuki et al fails to teach or suggest the sign function recited in the equation of claims 2 and 5. This sign function is known in the art and described in the application at equation (2) on page 9. Neither equation (1) nor any other part of Suzuki et al teaches or suggests such a sign function. Suzuki et al teaches a difference in the second function  $x$  argument. This clearly differs from the sum in the second function  $x$  argument recited in claims 2 and 5. Thus equation (1) of Suzuki et al fails to make obvious the equation recited in claims 2 and 5. Accordingly, claims 2 and 5 are not made obvious by the combination of Crockett and Suzuki et al.

Claims 2, 3, 5 and 6 were provisionally rejected under 35 U.S.C. 101 as claiming the same invention as respective claims of 1, 4, 5 and 8 of U.S. Patent Application Serial No. 10/714,218.

Claims 2 and 5 recite different subject matter than recited in claims 1 and 5 of U.S. Patent Application Serial No. 10/714,218. The calculating the cross-correlation recited in claims 2 and 5 of this application includes the equation:

$$R[k] = \sum_{l=\text{initial}_x}^{\text{final}_x} \text{sign}\{y[mS_s + i + k]\} \cdot \text{sign}\{x[mS_a + i]\}$$

Claims 1 and 5 U.S. Patent Application Serial No. 10/714,218 includes the equation:

$$R[k] = \frac{\sum_{i=0}^{L_s-1} \{y[mS_s + i + k] \gg m\} \cdot \{x[mS_s + i] \gg m\}}{M_k}$$

The corresponding limitation in the equation of this application differs from the equation of the U.S. Patent Application Serial No. 10/714,218 in several aspects. The equation of U.S. Patent Application Serial No. 10/714,218 includes a right shift by m. This right shift is not included in the equation of claims 2 and 5 of this application. The equation claims 2 and 5 of this application uses only the sign bit of the functions  $y[mS_s + i + k]$  and  $x[mS_s + i]$  while the equation of claims 1 and 5 of U.S. Patent Application Serial No. 10/714,218 uses a variable number of bits dependent upon the value of m. The equation of claims 1 and 5 of U.S. Patent Application Serial No. 10/714,218 include a division by  $M_k$  not performed in the equation of claims 2 and 5 of this application. These differences between the equation of claims 2 and 5 of this application and the equation of claims 1 and 5 of U.S. Patent Application Serial No. 10/714,218 mean that the steps of calculating the cross-correlation perform different calculations. Because these calculations and the corresponding steps differ, claims 2 and 5 of this application are not the same invention as claims 1 and 5 of U.S. Patent Application Serial No. 10/714,218. Accordingly, claims 2 and 5 are allowable over U.S. Patent Application Serial No. 10/714,218.

The Applicants respectfully submit that all the present claims are allowable for the reasons set forth above. Therefore early reconsideration and advance to issue are respectfully requested.

If the Examiner has any questions or other correspondence regarding this application, Applicants request that the Examiner contact Applicants' attorney at the below listed telephone number and address to facilitate prosecution.

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Respectfully submitted,

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